R E M A R K S

In response to the Office Action mailed August 15, 2001, independent claims 1 and 11 have been amended to more clearly define applicants' invention. Amended independent claims 1 and 11, each now recites that the "new power transmission level" is transmitted to the source of the received signal. Furthermore, claim 1 has been amended to indicate that the power level of the desensitization signal is dynamically adjusted. No new matter has been added.

Attached hereto is a marked-up version of the changes made to the claims. The attached page is captioned **"Version With Markings To Show Changes Made."**

In the present Office Action, the Examiner has rejected "claims 1-17 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as his invention." More specifically, the Examiner states that "[c]laims 1 and 11 recite the limitation 'the noise level' on line 5 of claim 1 and line 8 claim 11, and 'the changing system operating parameters' on line 9 of claim 1 and lines 12-13 of claim 11." And, then adds "[t]here is insufficient antecedent basis for the limitations in the claims because these limitations were not introduced before."

Regarding the limitation "the changing system operating parameters," applicants have amended claims 1 and 11 to remove the indefinite article "the" before the phrase "changing system operating parameters." Applicants respectfully submit that it is proper grammar to refer to a plural noun without the use of a definite or indefinite article.

Regarding the limitation "the noise level," applicants respectfully traverse this rejection. Inasmuch as the "noise level" is an inherent feature or quality of the receive path, applicants respectfully submit that it is not proper grammar to refer to such features with the use of the indefinite article "a[n]." Indeed, Landis, on page 35 of his book the Mechanics of Patent Claim Drafting, Second Edition, states:

> "If an element by definition inherently includes a certain feature, such feature need not be recited and it is proper to refer, without previous mention, to such feature."

Accordingly, applicants believe claims 1 and 11 to be allowable under 35 U.S.C. §112.

Substantively, in the Office Action, claims 1-11 have been rejected under 35 U.S.C. §102(b) as being anticipated by Weaver, Jr. et al. Claims 1-5, 7, and 11-16 have been rejected under 35 U.S.C. §102(b) as being anticipated by Hall et al. Claims 6 and 17 have been rejected as being rejected under 35 U.S.C. §103(a) as being unpatentable over Hall et al. And, claim 8 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Hall et al. in view of Menant. Applicants respectfully traverse these rejections for the reasons set forth below.

Applicants' invention is directed to a method and system for desensitizing a base station receiver. This is accomplished by injecting a "desensitization" signal onto the receive path of the wireless receiver without attenuating the received signal down towards the noise level. Importantly, the level of desensitization can be dynamically adjusted based on changing system operating parameters, such as the received power level, frame error rate (FER), and/or bit error rate (BER). That is, the system operating

parameters can be examined so as to determine the level of desensitization necessary. Based on the desensitization level, a new power transmission level for the received signal is transmitted to its source so that the mobile unit maintains a sufficiently high signal power level to ensure, for example, a proper boundary handoff.

Ostensibly, the Examiner believes that Weaver, Jr. et al. discloses all the claimed elements of applicants' invention. Applicants respectfully submit that the Examiner misplaces his reliance on Weaver, Jr. et al.

Weaver, Jr. et al. discloses an apparatus and method for adding and removing a target base station from a network of base stations. The apparatus comprises two attenuators: one for setting an artificial receive noise power level and second for setting a transmit level.

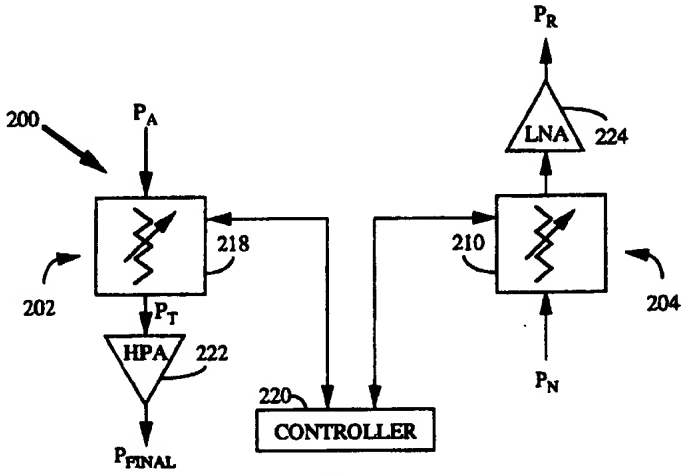


FIG. 3

Referring to Fig.3 of Weaver, Jr., et al., reproduced herein above, a base station 200 may be added or removed from a network of existing base stations as follows. The base station 200 has a

transmit path 202 and a receive path 204. In the receive path 204 is a first attenuator 210 that can be used to control a level of artificial noise receive power of the base station 200. The natural signal power (P_N) is the input to the first attenuator 210 which varies the level of the natural signal power from the mobile units which reaches LNA 224 and which varies the level of artificial noise receive power perceived by the receiver.

The output of LNA 223 (P_R) represents the sum of the attenuated natural signal power and artificial noise receive power as amplified by LNA 224. In the transmit path 202 is a second attenuator 219, which is used to vary the transmit power level of the base station 200. The attenuator level of both the first and second attenuators 210, 218 are controlled by a controller 220. The artificial noise level power sets the reverse link coverage area of the base station. When a base station is added, the transmit power is low and the artificial receive power signal is high. As loading increases, the artificial receive noise power is decreased and the transmit power is increased such that two coverage areas of the base station remain balanced.

Applicants wish to point out to the Examiner that Weaver Jr. et al. does not meet each and every claim limitation of applicants' claimed invention. Namely, the artificial noise level power, ostensibly a desensitization signal, does not raise the noise level of the receive path **without attenuating the received signal**, as claimed by applicants. Note that the first attenuator 210 attenuates the natural signal power while setting the level of the artificial noise level power. Col. 11:2140 In doing so, there is also some signal insertion loss, and may be a contributor to the overall noise figure of the receiver.

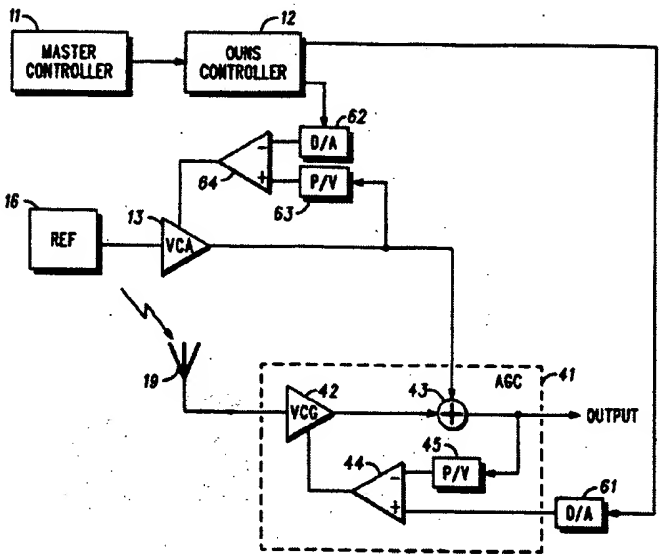
Rather than attenuating the received signal on the receive path down to the noise level as advocated by Weaver Jr., et al., applicants instead inject a "desensitization" signal onto the receive path of the wireless receiver. In this manner, the received signal is not attenuated. This is done so by adjusting the desensitization signal and coupling the signal to the receive path of the receiver, eliminating signal insertion loss.

Applicants are not simply claiming the use of a desensitization signal. Instead, what is being claimed is its use in a manner that obviates the disadvantage of doing so by having a variable attenuator on the receive path of the incoming signal which introduces signal insertion loss

Accordingly, applicants respectfully submit that their claimed invention is nowhere remotely shown, suggested or taught in Weaver Jr. et al.

The Examiner has further rejected applicants' claimed invention as being anticipated by Hall et al. Hall et al. discloses an "Other User Noise Simulator (OUNS)." In evaluating communication systems it is necessary to simulate the noise that would be present if the system were loaded to various capacities. Hall et al. discloses a receiver having an OUNS for effecting such a simulation. Referring to Fig. 4 of Hall et al., reproduced herein below, the receiver (40) contains an automatic gain control (AGC) (41) consisting of voltage control gain (VCG) device ((42) coupled to an input from the antenna (19). The output of the VCG (42) is coupled to a first input mixer (43). A second input of the mixer (43) is coupled to the output of VGA (13). The output of the mixer (43) provides the output for the AGC (41) as well as to one input of an operational amp (Op Amp) (44) through a power-to-

voltage (45). A second input to the Op Amp (44) is provided from an OUNS controller (12) through a D/A converter (61).



In operation, the AGC (41) normalizes the RF input signal to a known voltage or power level that is fed to an A/D converter. For example, if 50% loading is desired, the OUNS would contribute 50% noise power to the demodulator. The AGC (41) would adjust all power received at the input to contribute 50% signal power to the demodulator. In effect, the received signal is provided to an automatic gain controller which normalizes the received signal to a known voltage level, along with a noise signal representing a desired noise level that simulates a desired loading.

Applicants' claimed invention, however, requires <u>dynamically</u> adjusting the power level of the desensitization signal based on changing system operating parameters of the wireless communication system. In contrast, Hall et al. simply teaches how to simulate the noise that would be present if a wireless communication were loaded to various capacities. During testing, the injected noise is set depending on the simulated loading desired, not dynamically adjusted. Indeed, the injected noise is not dynamically adjusted

based on the actual operating parameters of the communication system, but rather on what the user wants them to be during testing. Nor is the power transmission level of the received signal adjusted based on the level of desensitization. Although the Examiner indicates that this is taught in col. 2:1-65 of Hall et al., applicants nowhere found such a teaching.

Applicants wish to point out to the Examiner that no information is transmitted to the source of the received signal about the transmission power. This should not be surprising since the problem sought to be solved by Hall et al. is substantially different than that sought to be solved by applicants. Applicants desensitize the receiver so as to raise the transmission power level of the source of the received signal. As such, this ensures that the mobile unit transmits a sufficiently high signal power level under different conditions, such as a boundary handoff. Since Hall et al. is merely simulating different loadings, there is no need for mobile units to adjust their transmission power.

As such, applicants respectfully submit that their claimed invention is nowhere remotely shown, suggested or taught in Hall et al.

Furthermore, the other cited reference, namely, Menant does not remedy the deficiencies of either Weaver, Jr. et al. or Hall et al. Menant nowhere remotely suggests desensitizing a receiver. Nor does Menant suggest or show adjusting the desensitization based on changing operating parameters of the communication system.

In view of the remarks above, applicants believe independent claims 1 and 11 to be allowable under 35 U.S.C. §§102,103. Since

independent claims 1 and 11 are allowable, it is believed that dependent claims 2-10 and 12-17 are also allowable.

Since this application is believed to be in condition for allowance, reconsideration and allowance are respectfully solicited.

Respectfully Submitted,
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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In The Claims:

1. (Twice Amended) In a wireless communication system, a method of receiving a signal on a receive path of a receiver, said method comprising the step of:

injecting a desensitization signal into said receive path to raise the noise level of said receive path relative to said signal level without attenuating the received signal on said receive path so as to desensitize the receiver;

dynamically adjusting the power level of the desensitization signal based on [the] changing system operating parameters of the wireless communication system; and

[communicating] transmitting to the source of the received signal a new power transmission level of the received signal based on the level of the desensitization signal.

11. (Twice Amended) In a wireless communication system, a receiver having a receive path for receiving a signal, said receiver comprising:

a desensitization signal source that is capable of producing a desensitization signal on a desensitization signal path;

a coupler connected to said desensitization signal path and said receive path and injects said desensitization signal into said receive path to raise the noise level on said receive path relative to the signal level without attenuating the received signal on said receive path so as to desensitize the receiver;

means for dynamically adjusting the power level of the desensitization signal based on [the] changing system operating parameters of the wireless communication system; and

means for [communicating] transmitting to the source of the received signal a new transmission power level of the received signal based on the level of the desensitization signal.